

ТҮЙІН

Еділбай тұқымы қазақтың құйрықты қойларының ең ірі тармағы болып табылады. Бұл мақалада әртүрлі жұп таңдау әдісі арқылы алынған еділбай тұқымының 4-4,5 және 7,5-8 айлық төлдерінің өсу мен даму көрсеткіштері келтірілген. Жас төлдердің дене өлшемдерін зерттеу нәтижесінде «Бірлік» ЖШС әкелінген өндіргіш-қошқарлардың ұрығымен ұрықтандырылған саулықтардан алынған төлдер өз құрдастарын тірі салмағы мен дене өлшемдері бойынша басып озды.

РЕЗЮМЕ

Едилбайская порода является самым крупным отродьем казахских курдючных овец. В этой статье дается описание результатам изучения роста и развития ягнят едилбайских овец в возрасте 4-4,5 и 7,5-8 мес., полученных от различных вариантов подбора баранов. Результаты изучения показателей промеров телосложения и экстерьерных особенностей ягнят в возрасте 4-4,5 и 7,5-8 мес. свидетельствуют, что ягнята, полученные от овцематок, осемененных спермами баранов-производителей репродуктора ТОО «Бирлик», превосходят сверстников и сверстниц контрольной группы по живой массе и по промерам.

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ECONOMIC-USEFUL TRAITS KAZAKH WHITE-HEADED BREED CATTLE'S DEPENDING ON THEIR GENOTYPE OF TRANSFERRIN LOCUS

Abstract

Selection marker is the use of markers for marking quantitative trait genes. In this article presents materials of the study of connection of economic-useful traits of cows and heifers of Kazakh white-headed breed genotype of transferrin locus.

Keywords: *economic-useful traits, Kazakh white-headed breed, transferrin locus, genotype, dynamics of heifers growth rate, average daily gain, measurements of cows.*

Over the years, breeders determine the genetic potential of beef cattle in its phenotypic data: on terms of growth, on live weight, on a milk yield and average phenotypic indicators of offspring. It was impossible to determine, which genes are inherited from parents, as phenotypic indicators a reaction genotype of the animal to the very changeable environmental conditions.

Since all of these economic-useful traits are quantitative traits, their inheritance is subject to the law of additive inheritance of traits and levels of animal performance depends on the proportion of groups of genes increase (enhancers) and lowering (suppressor) the manifestation of a particular trait.

According to A.K. Kadiyev [1] and other researchers another direction selection based on the use of biochemical polymorphism - a search for markers of individual economic-useful traits, i.e. the study of the links between genotype, which are easily identified by electrophoretic methods and by the degree of manifestation trait on phenotypic. Certain variants of proteins allelomorphic can serve as markers of any trait (morphological index, resistance and susceptibility to disease, stress, a single trait of productivity, etc.

L.I. Zhebrovski and V.E. Mityutko [2] studied the phenotypic variants of transferrin, and concluded that there are only 55 transferrins. But because of their frequency of occurrence is some species diverge, and in some species absent set of transferring variants. Each type their number very limited.

In our studies in animals Kazakh white-headed breed of farm «Dongelek» found three variants of transferrin: Tf-A, Tf-D and Tf-E. Above three allele gene transferring in combined six genotypes: Tf-AA, Tf-AD, Tf-DD, Tf-AE, Tf-DE, Tf-EE.

Table 1 – Allele and genotype frequencies of transferrin locus (n=43)

Locus		Symbolism	Frequency of occurrence
Tf	Alleles	Tf-A	0.326
		Tf-D	0.453
		Tf-E	0.221
	Genotypes	Tf-AA	0.140
		Tf-DE	0.209
		Tf-AD	0.209
		Tf-DD	0.233
		Tf-AE	0.186
		Tf-EE	0.023

While the frequency of the allele Tf-E in the herd it was very low - 0.221. Frequency of the allele Tf-D in the herd respectively at high level - 0.453. The highest frequency genotype Tf-DD and consequently a relatively low frequency genotype Tf-EE.

The main economic trait of beef cattle - live weight of calves at the age of 15-18 months, because at this age bull-calves of beef cattle take meat or sold for breeding. The level of live weight at this age under normal conditions of feeding and management, genotype animals which providing a certain level of growth rate of calves. Live weight at the age of 6-8 months is highly dependent on milk yield of their mothers. Therefore, when assessing the genetic possibilities of meat efficiency is the intensity of the growth of calves from 8 to 15, and sometimes up to 18 months. Thus, an indicator of high meat productivity should be selected indicators growth's rate of calves from 8 to 15 and sometimes up to 18 months. Based on the foregoing, we have paid attention to the dynamics of the live weight of the animals at different ages are shown in the table number 2, depending on the genotype of the animals on transferrin locus.

Thus it was monitored and determined genotypes of heifers and cows. As a result of selection for the herd repair are left mostly heifers, 40-50 percent. In farm "Dongelek" repair bulls are from the annual litter of about two percent. Therefore, to search for higher productivity indicator is better to use indicators of growth and development of repair heifers because of their greater numbers.

From Table №2 can see that the heifers genotype Tf-AE highly live weight in all age periods, as in the sucking and the period after detachable.

Table 2 – The dynamics of live weight of heifers, kg

$\bar{X} \pm S\bar{X}$					
Age, month	6	8	12	15	18
n	4				
TF AA	161.5±6.7	184.3±5.5	279.3±3.6	306.3±6.0	352.5±21.7
n	9				
TF AD	164.4±6.3	186.6±6.0	262.8±8.2	296.7±10.0	337.0±12.3
n	4				
TF AE	203.8±12.8	237.5±16.5	285.0±18.5	318.8±15.5	397.5±10.3
n	6				
TF DE	169.0±10.8	190.8±11.7	269.7±6.4	305.0±8.8	349.2±15.6
n	10				
TF DD	185.0±6.6	210.0±5.6	270.0±6.2	314.5±12.1	362.2±15.0
n	1				
TF EE	160	190	275	325	375

At our previous studies have found that individuals with genotype Tf-AE have the highest dairy, this forecast proved to be true and this time, it can be argued that the Tf-AE is an indicator of high cow's dairy of farm "Dongelek" herd (Table 2).

It is very important to note that the resulting obtain high start on the intensity of growth in the suckling period of animals with this genotype, which in the genotype of mothers evidently attended Tf E gene that caused high growth rate in the course of further development of the young animals.

Thus, individuals with this genotype, has a leading position to 24 months of age (Table 3).

Table 3 – Average daily gain of heifers in ontogenesis, g

Age, month	8-12	12-15	15-18	18-24	8-15	8-18	8-24
Days	122	91	91	183	213	305	488
TF AA (n=4)	822	297	398	433	597	536	497
TF AD (n=9)	632	371	450	388	521	498	456
TF AE (n=4)	277	495	398	430	370	377	397
TF DE (n=6)	647	360	513	275	525	519	428
TF DD (n=10)	492	478	535	376	486	500	453
TF EE (n=1)	697	440	659	158	587	607	439

At the same time it revealed an interesting fact that the intensity of growth in the period from 8 to 18 months of age, individuals with this genotype had the lowest intensity of growth, and the average increase was 377 g, whereas the individual with the genotype Tf-EE in this period had highest intensity of growth, respectively 607 g per day.

Considering the measurements of mature cows in the incision of parts genotypes of transferrin locus, we could not find any significant interrelation of genotype of animals with their measurements (Table 4).

Table 4 – Averages measurements of cows depending on their genotype of transferrin locus, sm

Gene-type	height at the withers	height at sacrum	chest depth	width chest	width B hill	Straight length corpus	Oblique length bum	chest girth	metacarpus girth
AA	126,3±0,5	129,5±0,6	67,8±3,2	47,0±2,4	53,5±2,1	154,0±5,7	50,4±1,9	199,0±4,2	19,3±0,3
AD	125,7±0,8	128,9±1,0	65,2±1,0	45,1±1,8	52,9±0,9	148,9±2,5	51,3±1,0	194,1±3,2	19,3±0,3
AE	127,5±1,4	130,0±1,2	68,3±2,0	42,5±0,6	52,3±1,0	146,8±2,5	50,3±0,5	197,8±6,1	20,4±0,5
DE	125,4±1,3	128,2±1,3	69,2±1,0	45,1±0,8	52,8±0,5	155,6±2,5	50,5±0,6	193,4±1,7	19,8±0,3
DE	126±1,2	129,3±1,0	70,2±1,4	47,1±1,4	53,7±1,0	156,7±2,9	51,7±1,0	196,0±2,4	19,2±0,3
EE	122	125	71	48	51,5	160	50	188	19

Perhaps this is due to that the beef cattle tamed by the person not to the same extent as the dairy cattle, and human approximation show great concern, therefore reduces the accuracy of the measurement. Perhaps this is due to that, beef cattle, that is accustomed to a person not to the same degree as dairy cattle and human approach gives them great concern, therefore, reduces the dimension measurement accuracy.

Indicator of cow's dairy of farm "Dongelek" transferrin locus is Tf-AE, of live weight and growth data on the studied, presumably – TF-EE.

PEFERENCES

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ТҮЙІН

Маркерлі селекция – бұл сапалық белгілердің генін маркерлеу үшін маркерлерді қолдану. Бұл мақалада қазақ ақбас тұқымының қашарлары мен сиырларының шаруашылыққа пайдалы белгілерінің трансферрин локусының генотиптерімен байланысы берілген.

РЕЗЮМЕ

Маркерная селекция – это использование маркеров для маркирования генов количественного признака. В этой статье приведены данные об изучении связи хозяйственно-полезных признаков телок и коров казахской белоголовой породы с генотипом по трансферриновому локусу.

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ОСОБЕННОСТИ ФОРМИРОВАНИЯ ЭКСТЕРЬЕРА МОЛОДНЯКА МОЛОЧНОГО, МЯСНОГО И КОМБИНИРОВАННОГО НАПРАВЛЕНИЯ ПРОДУКТИВНОСТИ

Аннотация

В статье представлены результаты сравнительной оценки изменений линейных промеров тела и особенности формирования экстерьера бычков, кастратов и телок чернопестрой, симментальской, казахской белоголовой и абердин-ангусской пород. Установлено, что чем больше возраст, тем выше становится разница между как межпородными, так и внутрипородными половозрастными группами, не только по величине отдельных промеров, но и в целом по экстерьерным особенностям.

Ключевые слова: порода, пол, возраст, экстерьер, тип телосложения, промер.

Современное животноводство не может успешно развиваться без постоянного расширения и углубления знаний о природе организма. Поэтому изучение биологических особенностей роста и развития животных и накопление данных о закономерностях индивидуального развития организма и его реактивности на условия внешней среды являются одной из важнейших задач сельскохозяйственной биологической науки, и представляют не только теоретический, но и большой практический интерес как в племенном, так и в пользовательном животноводстве [1-7]. Накопление знаний по особенностям формирования типа телосложения, экстерьерным различиям и скорости не только весового, но и линейного роста молодняка различных пород в возрастном аспекте дает возможность планомерно управлять развитием организма и повышать продуктивность животных.

Размеры тела и конституциональные особенности животных к половозрелому состоянию зависят от многих факторов: породы, пола, условий выращивания, уровня и полноценности кормления [8-12].

Это и послужило основанием сравнительного изучения возрастных изменений линейного роста молодняка разного пола и физиологического состояния оцениваемых по мясной продуктивности пород при интенсивном выращивании.